

Research dedicated to hydrogeological instability: a contribution to the prevision, prevention and risk mitigation

Call for proposals

Deadline: April 21st, 2016

BACKGROUND

Hydrogeological instability is one of the plagues of Italian landscape. More than 10% of Italy is at high risk hydrogeological disorder. This area hosts 82% of national municipalities and 6 thousand schools, 550 hospitals and 4 million buildings. In a worldwide contest in which the effects of global warming are becoming more and more evident, through the spread of extreme meteorological phenomena characterized by the development of severe rainfall concentrated in limited time, irrational management of our geological area and resources tend to be closely linked to the occurrence of landslides and floods. The latter seriously impact on security and safety of local communities, services activities as well as inhabitants/population.

Every year in Italy we count more than one thousand landslides. A million of citizens are exposed to these. In addition floods annually affect an area equal to 12.000 km² and a total of 6 million of citizens.

These events tend to occur in areas which have already experienced similar phenomena, or alternatively, frequently hosted events that may be consider the cause of these hydrogeological instability.

In Lombardia, every year 76 thousand people are exposed to landslide risk, 600 are at flood risk. Between 2009 and 2014 we count 125 events falling under the label of hydrogeological disorders, with a total of 914 municipalities, 600 schools, 50 hospitals and 5000 businesses exposed to these risks.

The lack of knowledge to forecast, prevent and mitigate events associated to hydrogeological disorders comes with a growing number of individuals at risk.

AIMS

In light of the above considerations, with this call for proposals Fondazione Cariplo intends to sustain strong multidisciplinary projects aimed to studying the problems associated to hydrogeological instability.

Specifically, the priority areas addressed by this call include:

- the implementation/update of Local Information System, and data bases related to hydrogeological disorders;
- the study/development of predictive models for all different extreme meteorological events;
- the implementation and update of the maps of the areas at risk.

The scientific community is called to focus its effort on: prevention and prevision of disasters following the development of extraordinary meteorological events, improve our knowledge of the of hydrogeological basins and develop instruments allowing a better and more efficient observation of our landscape thought meteorological radars and/or satellite systems.

The development of research and technologies to mitigate the risk of hydrogeological instability is likely to allow a better organization and categorization of the information within our local context. We expect that this information will provide solid material to our

local administration allowing the development of instruments and policies reducing the risks and in parallel increasing society awareness of the problem.

It is also required that the projects represent a training and professional opportunity for the young researchers involved.

Fondazione Cariplo aims to promoting initiatives envisioning the accomplishment of activities of communication and interaction with the civil society, fostering Responsible Research and Innovation¹.

GUIDELINES

Eligible applicants

Beyond the general requirements set out in the “*Guidelines for presentation*”, this call for proposals is addressed to institutions which directly carry out scientific research in the specified field of interest and have adequate staff and equipment for its realization.

Moreover, it is mandatory that the lead hosting institution, and more specifically the operational headquarters of the project, be located within the geographical area of interest of Cariplo Foundation (Lombardia plus Novara and Verbania districts). This requirement does not pertain to potential partners.

By submitting a proposal, applicant organizations accept the “portability of the grant”. This means that PIs always maintain the rights to require the transfer of the research project to a new eligible institution, for as long as the research objectives are preserved. Any change in the host institution depends on Fondazione Cariplo approval according to the guidelines of this call of proposals.

The Foundation shall not accept applications by PIs (both leader PIs and partner PIs) of projects funded by the Scientific Research Area of the Foundation in the context of past calls and still ongoing. A project is considered ongoing unless the final grant reports - both the scientific and the economic one - have been uploaded on the dedicated area of the Foundation website within the deadline of the present call.

Eligible projects

To be eligible, proposals must:

- respect the priority areas indicated in the call;
- involve, train and care for the valorisation of young researchers²;
- prepare a communication plan of activities with civil society, coordinated by a young researcher according to the communication guidelines published online³.

¹ The European movement on the theme of Responsible Research and Innovation (RRI) is constantly evolving, as emerges from the debate which has recently led to the so called “Rome declaration on RRI” (http://www.sis-rri-conference.eu/wp-content/uploads/2014/12/RomeDeclaration_Final.pdf). In light of the available literature, it is possible to describe RRI as a dynamic and iterative process which intends to match research and innovation to values, needs and expectations of the society. Moreover, RRI aims at actively involving all the stakeholders taking part to activities of research and innovation, making them mutually responsible with respect to both the research process and its results.

² The term “young researcher” in this call for proposals indicates graduate fellows, PhD students and post-docs not older than 35 years old on the 21st of April.

³ For more detail see note 2.

Moreover, any proposal with the following characteristics will be considered ineligible:

- funding requests aimed at setting up new research centres or laboratories;
- basic research projects without any tangible application;
- projects exclusively meant to technology transfer;
- projects including for-profit organizations as direct beneficiaries of the Foundation's grant.

The total cost of the project can only include costs related to the realization of the proposed studies, respecting the eligibility criteria and the thresholds listed below:

- A03 - "Equipment and software"
This entry cannot exceed 20% of the additional costs⁴ and can exclusively include newly acquired equipment and software, limited to the percentage of use which can be ascribed to the project.
- A04 - "Other amortizable costs"
This entry can only include patent costs.
- A06 - "Temporary staff"
This entry can only include research personnel costs. The cost of administrative staff is not allowed.
- A07 - "Sub-contractors and consultants"
This entry should also include audit costs, where applicable⁵.
- A08 - "Materials and supplies"
This entry cannot include costs related to stationery and photocopies.
- A09 - "Overheads"
This entry cannot exceed 5% of the additional costs⁶.
- A10 - "Others"
This entry cannot exceed 15% of the additional costs⁷ and can only include travel expenses and conference participation fees for the research personnel involved in the project and scientific publications.

The grant will cover 100% of project costs. Requested funding should range from 100,000 to 200,000 euros.

When filling in the forms, note that the total cost of the project will have to coincide with the requested funding.

Evaluation criteria

Projects will be evaluated through a peer review process relying on external, independent and internationally renowned reviewers, in order to guarantee transparency and objectivity. At the end of the evaluation process, a feedback containing the reviewers' comments will be transmitted to each applicant.

Besides the overall scientific quality of the proposal, the evaluation will take into account the following elements:

⁴ Sum of: A03, A04, A06, A07, A08, A10.

⁵ With the sole aim of ascertaining whether the obligation to perform a financial audit applies or not, the amount which has to be considered is obtained multiplying the eligible costs detailed in the Budget (sum of entries A06, A07, A08, A09 and A10) by the coefficient 1.25 (which represents an estimate of the co-funding generally guaranteed by the hosting institution, mainly in the form of permanent staff). It is also recommended to refer to chapter 10 of the "Grant management and reporting guide" and to the "Guidelines for audit"; both documents are available on the "Grant management and reporting" page of Cariplo Foundation's website.

⁶ See footnote 4.

⁷ See footnote 4.

- the level of analysis of the state of the art;
- robustness of preliminary data;
- the clarity of the project aims and strategies;
- the significance of the project in providing an answer to the problems of hydrogeological instability;
- expected outcomes in terms of prevision, prevention and mitigation of the risks associated to hydrogeological instability;
- proper integration of the project results in the research debate taking place in the local context;
- the contribution to significantly increase the state of the art;
- proper use of existing maps and their harmonization and integration with other already existing studies;
- the originality and innovativeness of the project;
- the adoption of multidisciplinary approaches;
- scientific leadership of the PI;
- track record of the PI and the research team;
- the level of collaboration with national or international research centres and the ability to build partnerships and networks;
- the adequacy of budget and duration of the project;
- the engagement of young researchers, also in positions of responsibility, and the presence of plans for their training and professional development⁸;
- identification of a young scientist involved in the research activities who will communicate research results to the public;
- the presence of initiatives that, in line with the principles of Responsible Research and Innovation, foster dialogue with the civil society⁹;
- the efficacy of the communication plan.

AVAILABLE BUDGET

The budget available for this call for proposals consists of 1.5 million euros.

Before submitting a proposal, applicants are kindly invited to carefully read the documents listed below, available on Cariplo Foundation's website at www.fondazione cariplo.it:

- *Guidelines for Presentation*;
- *Grant management and reporting guide*;
- *Communication guidelines*;
- *Guidelines for acknowledgement in scientific communications*;
- *Intellectual property rights policy*;
- *Open access policy*.

By submitting a proposal, applicants acknowledge, agree and accept that the award of the grant requires the irrevocable acceptance of the aforementioned policies. As well as the respect of all the indications presented in the guide and guidelines mentioned above.

In order to apply for a grant under this call for proposals, it is strongly recommended to:
- carefully fill in all the online forms, which specifically include:

⁸ See footnote 2

⁹ See footnote 1.

- registry of the leading hosting institution (new applicants should fill in the form *ex novo*, while organizations which have already registered should check and update, when necessary, their details);
- project section (in Italian);
- complementary data (in English);
- budget section.

- upload all the requested documents according to the *Guidelines for Presentation*:

- detailed project¹⁰;
- detailed budget¹¹;
- letter of support from the legal representative of the host institution for the lead organization;
- partnership agreement and letters of support from the partners (for projects in partnership only);
- documentation of the hosting institutions.

¹⁰ The detailed project has to be compiled on the basis of the form available for this call for proposals, which can be downloaded from the online section “Complementary Data”.

¹¹ The detailed budget has to be compiled on the basis of the form available for this call for proposals, which can be downloaded from the online section “Complementary Data”.